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**EXTENDED
ABSTRACT**

The Relationship Between Mental Health and Athletes' Readiness After ACL Injuries Among Football Players

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I. INTRODUCTION

ACL injuries are prevalent in football due to high-impact movements and sudden directional changes, often requiring surgery and extended rehabilitation [1][2]. These injuries frequently trigger psychological issues such as depression, anxiety, and fear of re-injury [3]. This study investigates mental health status during ACL rehabilitation and examines the relationship between psychological symptoms and athletes' readiness to return to sport.

II. METHODS

Data were collected through standardized mental health questionnaires from 35 football athletes aged 18–30 years who were undergoing rehabilitation for ACL injuries. Participants were recruited from both professional and collegiate teams. Descriptive statistics were applied to summarize levels of depression, anxiety, and stress. Additionally, Pearson correlation analysis was performed to examine the association between psychological symptoms and ACL-RSI scores, offering insight into how mental health status may relate to athletes' psychological readiness to return to sport.

III. RESULTS AND DISCUSSION

A. Mental Health Status and Support Gap During ACL Rehabilitation

As shown in Table 4.1, the mean depression score was 5.94 ($SD = 2.14$), with scores ranging from 3 to 11. Based on DASS-21 severity classifications, this reflects an overall mild level of depressive symptoms among participants, with no cases reaching severe levels. This aligns with previous research indicating that psychological distress, particularly mild depression, is commonly experienced during ACL rehabilitation [3].

Anxiety scores ranged from 1 to 8, with a mean of 4.11 ($SD = 1.92$), suggesting low to moderate anxiety. Stress scores ranged from 2 to 12, with a mean of 5.43 ($SD = 2.13$), indicating moderate stress levels. These patterns are consistent with past study, who noted that athletes often experience emotional strain during the lengthy and uncertain recovery period from ACL injuries [2][3].

For the ACL-RSI score, which measures psychological readiness to return to sport, participants scored between 39 and

112 out of a possible 120, with a mean of 72.74 ($SD = 17.70$). This suggests a moderate to high level of confidence, although the wide range reflects notable individual differences. Some athletes were highly confident in returning, while others remained psychologically hesitant—often linked to fear of re-injury and self-doubt [1].

TABLE I
DESCRIPTIVE STATISTICS FOR DEPRESSION, ANXIETY, STRESS, AND ACL-RSI SCORE (N = 35)

	N	Minimum	Maximum	Mean	Std. Deviation
Depression	35	3	11	5.94	2.141
Anxiety	35	1	8	4.11	1.922
Stress	35	2	12	5.43	2.132
ACL-RSI score (0-120)	35	39	112	72.74	17.701

B. Relationship Between Recovery Duration and Mental Health

Correlation analysis revealed strong, positive relationships between depression and anxiety ($r = 0.609, p < 0.001$), and between depression and stress ($r = 0.701, p < 0.001$), while anxiety and stress were moderately correlated ($r = 0.526, p = 0.001$). These results suggest that psychological symptoms were closely linked, consistent with findings by [3], who reported high comorbidity of psychological distress during ACL recovery.

However, ACL-RSI confidence scores were not significantly correlated with depression ($r = -0.120, p = 0.493$), anxiety ($r = 0.085, p = 0.628$), or stress ($r = 0.128, p = 0.465$), indicating that psychological readiness to return to sport was not directly associated with mental health symptoms. This aligns with [2][3], who emphasized that return-to-sport confidence may involve other psychological and situational factors beyond general emotional distress.

TABLE II
 PEARSON CORRELATIONS BETWEEN MENTAL HEALTH VARIABLES AND
 ACL-RSI CONFIDENCE SCORES AMONG FOOTBALL ATHLETES

Variables	Depression	Anxiety	Stress	ACL-RSI Confidence Score
Depression	—			
Anxiety	0.61**	—		
Stress	0.70**	0.53**	—	
ACL-RSI Confidence Score	-0.12	0.09	0.13	—

** Correlation is significant at the 0.01 level (2-tailed).

IV. CONCLUSIONS

Depression, anxiety, and stress are commonly reported among football athletes recovering from ACL injuries; however, mental health support remains limited during rehabilitation [3]. In this study, no significant association was found between the duration of recovery and psychological outcomes, underscoring the need for early, individualized rehabilitation programs that integrate both physical and mental health components [2][3].

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REFERENCES

- [1] Grassi, A., Macchiarola, C., Filardo, G., Zaffagnini, F., & Marcacci, M. (2020). Epidemiology of anterior cruciate ligament injuries in professional football players. *Orthopaedic Journal of Sports Medicine*, 8(3), 1–7. <https://doi.org/10.1177/2325967120902908>.
- [2] Filbay, S. R., & Grindem, H. (2019). Evidence-based recommendations for the rehabilitation of anterior cruciate ligament injuries. *British Journal of Sports Medicine*, 53(23), 1444–1452. <https://doi.org/10.1136/bjsports-2018-099630>.
- [3] Arden, M. L., Kvist, S., & Webster, K. E. (2023). Psychological aspects of anterior cruciate ligament injuries and rehabilitation: A systematic review. *Physical Therapy in Sport*, 61, 20–28. <https://doi.org/10.1016/j.ptsp.2023.01.003>.